

Article

Risks and Challenges Associated with NEOM Project in Saudi Arabia: A Marketing Perspective

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Abstract: Saudi Arabia has proposed a new project, NEOM city, planned on the coast of the Red Sea with various unique and challenging features as a part of its vision 2030 to transform itself from an oil-dependent economy to knowledge-based economy. However, there are various risks and challenges associated with the project, the study of which is essential to effectively design and implement marketing and promotional strategies. Considering the large scale and scope of the project, the purpose of this study is to identify and evaluate the major contexts and associated risks in accordance with the planned city's objectives. An online questionnaire-based survey was used to collecting data related to the severity of the risks identified and classified in a literature review. A purposive sampling approach was adopted to select experts from various governmental institutions to participate in the study. A final sample of 417 expert participants was achieved from various ministries and departments in Saudi Arabia. Eleven risk factors and challenges were identified, including design challenges, as well as legal, contractual, operational, force majeure, human resources, financial, technological, political, environmental, and sociocultural risks. Risks related to human resources (mean impact = 4) and technology factors (mean impact = 4), as well as contractual risks (mean impact = 3.9), were identified to be very high, whereas environmental (mean impact = 2.7), legal (mean impact = 2.5), and force majeure (mean impact = 2.2) risks were identified to be of low severity. Managing mega projects requires effective planning and implementation, along with risk identification and mitigation mechanisms. In addition, it is essential to manage various influencing factors (especially government decisions) in the process of implementation to achieve success.

Keywords: NEOM; risk identification; mega projects; risk severity; risk assessment; marketing



Citation: Algumzi, Areej. 2022. Risks and Challenges Associated with NEOM Project in Saudi Arabia: A Marketing Perspective. *Journal of Risk and Financial Management* 15: 381. <https://doi.org/10.3390/jrfm15090381>

Academic Editors:
Dan-Cristian Dabija and
Veronica Campian

Received: 26 June 2022
Accepted: 21 July 2022
Published: 26 August 2022

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1. Introduction

Large, ambitious projects around the world often include various risks and challenges that may lead to project failures if not managed effectively. For example, the Millennium Dome constructed the UK (London) to celebrate the millennium (2000) comprised twelve steel support towers, representing each month in a year, with a diameter of 365 m, representing the number of days within a year. The dome in Greenwich Peninsula in London was estimated to be built at a cost of USD 1.25 billion and opened to the public on 1 January 2000, but it failed to attract the estimated 12 million visitors. With an unexpected reduction in visitors, the dome underwent a further USD 40 million decommission and was later converted to a music venue, which is now called the O₂ Arena (McFadden 2021). Similarly, Schonfeld Airport in Germany, which was initiated in 1996, has undergone numerous change requests and issues with planning and design, and possible poor project management has led to an increase in the initial planned project cost from USD 2 billion to USD 7 billion before finally opening in 2020 after long delays (Luke et al. 2017). These cases highlight the considerably risks and challenges involved in large-scale projects, which, if not managed effectively, can lead to disastrous failures that not only affect the brand of the host nation but also creates an additional burden on the exchequer. These two cases represent simple construction and transport project failures.

However, there are other projects being planned involving large-scale investments, such as developing smart cities, with a focus on the design and implementation of projects across various dimensions, including healthcare, transport, education, infrastructure, sociocultural aspects, business promotional zones, etc. Recently, Saudi Arabia launched a proposal to build a new city called 'NEOM', meaning 'a new future' with a unique approach to urbanization with a 170 km long linear urban development line (Goda et al. 2019). The Saudi Arabian government has set up a closed joint-stock company called NEOM with USD 500 billion (project cost), using wholly public funds (NEOM 2021). With its strategic location on the Red Sea, more than 40% of the world population can reach the city with a less than a four-hour flight journey. The city is powered by 100% renewable energy, promoting sustainable development practices (Bostock 2021). The city would be completely powered by renewable energy sources (Reuters 2021), and the first phase of the project is estimated to be completed by 2025 (Arab News 2021). There are various aims and objectives of NEOM, which makes it a unique and ambitious project for the future. Some of the major objectives are listed below (Bostock 2021).

- All essential daily needs can be met within five minutes of walking from any corner of the city, reducing the dependency on transport; the city would have no cars.
- The city transport system is seamlessly integrated with AI technologies and built completely underground with an ultra-high-speed mass transit system along the line.
- All businesses and communities in NEOM are hyperconnected through a digital framework incorporating artificial intelligence and robotics that continuously learns and grows; more than 90% of the data in NEOM will be analysed to provide a predictive system with ever-improving services to residents and businesses.
- NEOM would become a hub for innovation, where global business and emerging players can research, incubate, and commercialize ground-breaking technologies to accelerate human progress.
- Protecting stunning landscapes and integrating nature into the heart of communities for unmatched lifestyle and wellbeing.

With the above listed objectives, it can be understood that the NEOM project is designed for future. However, such a large project does carry risks and challenges in different areas, which might affect its development through the phases, similar to Schonfeld Airport or other large projects. Effective planning and operational mechanisms are essential to managing risks and challenges, keeping costs under control, attracting investors and people from other countries, etc. A similar approach was adopted by Dubai, which has attracted a significant number of people and investors from various countries and was successful in developing key innovative and large scale-projects (NEOM 2021; Akhavan 2017; Al-Saleh 2017; Joghee et al. 2020); however, recent economic challenges have become a cause of concern with rising debts (Lee and Jain 2009). Dubai has adopted an effective marketing and promotional strategy, which has attracted investors from various countries. In mega projects such as NEOM, it is very essential that marketing and promotional strategies are designed and implemented during the project planning and development stage in order to attract investors and increase FDIs and reduce the risk of financial liquidity. As a result, it is important to analyse the risks and challenges associated with the project in order to effectively design a promotional and marketing strategy so that the right message can be delivered to the right people (investors and buyers) at right place and time. Therefore, there is a need to understand the risks and challenges associated with large projects such as NEOM from both short-term and long-term perspectives in order to effectively manage the development process. Considering the scope of the NEOM project, the nature of risks and challenges have to be considered from a multidimensional perspective. Considering this factor, the purpose of this paper is to identify and evaluate the major contexts and risks associated with the planned city's objectives.

2. Literature Review

Urbanization is a challenging process often associated with unmanageable and unplanned objectives and services, such as transport, communication, sanitation, healthcare, education, etc. (Hvidt 2019). Numerous studies have focused on the risks and challenges associated with urbanization and management of large cities. Technological risks; air, water, and soil pollution; crime; fire; eviction; ethnic and social conflict; accidents; environmental health risks; and various natural threats were identified in relation to urban and semi-urban areas (Koirala 2018). It is often difficult to assess new risks in new environments. Various aspects, such as communication, mobility, housing, education, business and entrepreneurship, electricity, drinking water, healthcare, etc. (Hvidt 2019), have to be effectively planned and implemented by accurately predicting the growth of a (new) city as a result of immigration and investment, in contrast to an existing city, which is a complex and time-consuming process. However, identifying risks and developing mitigation plans can increase the chances of success and smooth implementation of projects. Risks including legal, financial, technical, sociocultural, political, human resources, and quality risks were identified in (Hvidt 2019) in relation to urban infrastructure. In a different context, the authors of (Davis 2010; Kitchin and Dodge 2017) identified risks associated with technology and social aspects, such as privacy and security of mobile devices and services, as well as smart city infrastructure, power systems, healthcare, and educational frameworks. Environmental and sustainability risks have also been identified in relation to the development of urban infrastructure (Ismagilova et al. 2020; Hunt and Watkiss 2011). A systematic review (Huq et al. 2007) of risk management in mega projects classified risks into various categories, which are explained below.

- Design risks: These risks are mostly associated with the planning phase of projects and are associated with the scope, contracts, and features of the project. They can also be further categorized into infrastructural or subprojects, such as mobility or transport, healthcare, education, public parks, etc. (Irimia-Diéguez et al. 2014; Murgante and Borruso 2013)
- Legal risks: These are risks that can result in damage or loss incurred due to incompliance with laws. In the context of cities, these can be associated with safety regulations, disaster management, environmental laws, sustainability aspects, compliance with international regulations, labour laws, etc.
- Contractual risks: These risks result from renegotiations of contracts relevant to issues such as change in project scope, as well as issues caused by imprecision and vagueness in contracts (Huq et al. 2007).
- Construction risks: These are among the most significant risks and can be associated with various factors, such as cost and time delays, coordination problems, quality aspects, etc. (Saaty and De Paola 2017; Duan et al. 2019).
- Operational and maintenance risks: These types of risks are associated with the operational phase and can affect costs, quality, economic viability issues, etc. (Huq et al. 2007).
- Human resources risks: These risks are associated with workforce management and are usually related to areas such as talent management, training, work culture, support, motivation, etc. (Huq et al. 2007).
- Force majeure: These risks result from external factors, such as natural disasters, extreme weather conditions, terrorism, war, etc. (Huq et al. 2007).
- Financial risks: These risks can be related to variety of events associated with financing, such as risks related to investments, economic structure resulting in lower-than-expected profitability, liquidity risks, availability of funds, foreign exchange and debt risks, etc. (Huq et al. 2007).

In addition to the risks identified in (Huq et al. 2007), other risks may be associated with mega projects launched by governments. These can include the following:

- Technological risks: With the integration of innovative technologies in the development of smart cities, various risks can be identified, which can be related to the adoption and maintenance of data privacy and security, technological acceptance, integration of components, etc. (Davis 2010; Kitchin and Dodge 2017; Abdou 1996).
- Political/governance risks: These risks are related to political systems, such as political instability, lack of co-ordination between departments, changing political opinions of decision makers, etc. (Hvidt 2019).
- Environmental risks: Environmental risks can be understood as actual or potential threats of adverse effects on living organisms and the environment by the proposed project. These also include the impact of cities, when operational and functioning, on the environment, such as pollution, radiation, emissions, etc. (Gupta and Hall 2021).
- Sociocultural risks: These are associated with issues related to cultural and social differences in cities with a diverse population, for example, the impact of foreign immigrants' culture on the local community or vice versa.

It was observed that there is a lack of literature in relation to the risk factors associated with building new cities. However, studies that have identified risk factors with respect to urban infrastructure and other subprojects, which can be linked to the risk factors associated with developing new mega projects, such a NEOM.

3. Methods

3.1. Questionnaire Design

Various risk factors were identified in a literature review (Davis 2010; Kitchin and Dodge 2017; Ismagilova et al. 2020; Hunt and Watkiss 2011; Huq et al. 2007; Irimia-Diéguez et al. 2014; Murgante and Borruso 2013; Saaty and De Paola 2017; Duan et al. 2019; Abdou 1996; Gupta and Hall 2021) literature were adjusted in relation to the NEOM city features and objectives. In order to evaluate these risks, an online questionnaire-based survey was adopted. The survey questionnaire was designed in two parts. The first part provides an introduction to the survey, a brief description of NEOM city, links to information about NEOM, the data usage policy, and privacy aspects to fully inform participants about the study and its objectives. At the end of first section, an acceptance button is provided, with which participants provide their consent. The second part of the questionnaire was designed by listing various risk factors identified from various studies, which are classified in to ten categories, including design challenges (five items) (Irimia-Diéguez et al. 2014; Murgante and Borruso 2013), legal (four items) (Irimia-Diéguez et al. 2014; Murgante and Borruso 2013), contractual (three items) (Huq et al. 2007), operational (six items) (Huq et al. 2007), force majeure (four items) (Huq et al. 2007), human resources (six items) (Huq et al. 2007), financial (six items) (Huq et al. 2007), technological (seven items) (Davis 2010; Kitchin and Dodge 2017; Abdou 1996), political (four items) (Hvidt 2019), environmental (four items) (Gupta and Hall 2021), and sociocultural (ten items) risks (developed by the authors). Each item in the questionnaire was designed to be rated using a five-point Likert scale (1 = very low severity; 2 = low severity; 3 = medium severity; 4 = high severity; and 5 = very high severity) (Milner et al. 2019). The questionnaire was then translated to Arabic by two professional Arabic translators.

A pilot study was conducted with six university members (four MBA students and two lecturers). Cronbach's alpha ($0.86 > 0.70$) (Likert 1932) was used to calculate the reliability of the questionnaire items, indicating good reliability and consistency. In addition, feedback was collected from all participants in pilot study, based on which a few words were rewritten in Arabic to reflect a more accurate meaning in relation to the items in the English version of questionnaire. The Arabic version of questionnaire was then uploaded to the QuestionPro application (Taber 2018), generating a link to the questionnaire.

3.2. Recruitment

The survey link was forwarded to various experts (managers, department heads, senior executives, etc.) working under different ministries, including planning, transportation,

healthcare, education, and other related departments. The survey was conducted over a period of four weeks between 30 November 2020 and 28 December 2020. Portals and online communities were used to forward the survey link to experts.

3.3. Sampling

As the objective of this study was to identify risks and challenges associated with the NEOM project, the need to identify a specific group of experts that included policy makers and decision makers from different government entities was realised. Accordingly, purposive sampling (Rosly and Khalid 2018) was adopted to select the participants. As explained in the previous section, the survey link was initially forwarded to 564 experts, of which 96 participants completed only part of the survey and 51 experts did not participate in the survey at all. As a result, a final sample of 417 was achieved, reflecting a response rate of 73.9%.

3.4. Data Analysis

The responses to the questionnaire items were downloaded from the QuestionPro application and loaded into Excel spreadsheets. Average ratings (mean) and standard deviations for each item were calculated in order to prioritise the risks based on their severity and to analyse the variance in responses. Accordingly, the findings are discussed in the next section.

3.5. Results

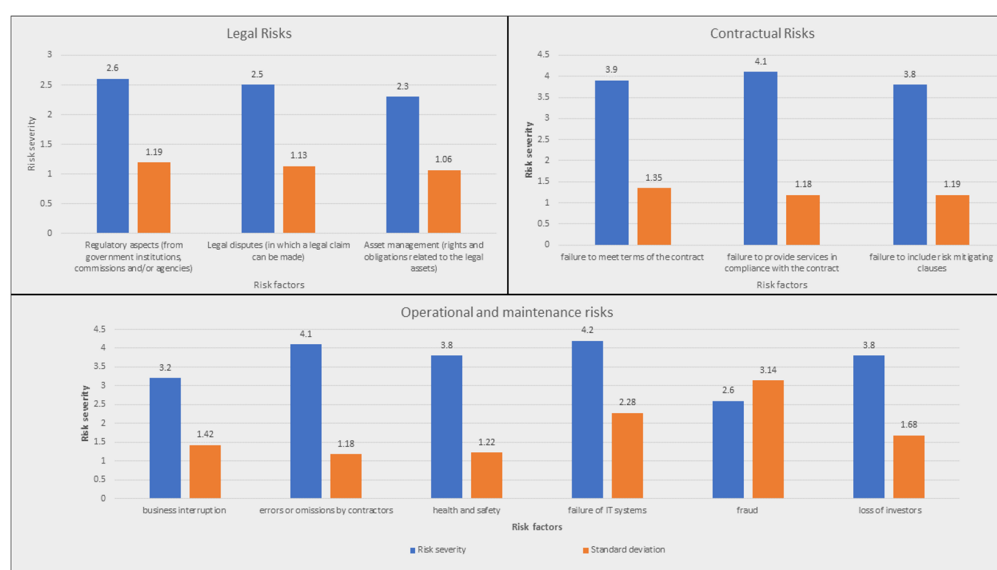
The final sample achieved for the study was 417. The survey participants included 151 managers (36.2%), 128 department heads (30.7%), 42 senior executives (10.1%), and 96 (23%) participants working at other levels. The demographic information of the participants is presented in Table 1. A majority of the participants were male (77.2%), and females participants accounted for 22.8% of the total participants. Low female participation can be a result of higher male population in different roles in public departments compared to females. A majority of the participants were aged between 30 and 39 years (47.5%), followed by 40–49 years (42.2%), 50–59 years (6.2%), 20–29 years (3.6%), and only 0.5% participants were aged more than 59 years. A majority of the participants fall in the age group of 30–49 years, reflecting the seniority of their roles. Accordingly, a majority of the participants had 6–10 years of experience of (44.4%), followed by 3.5 years (38.8%), more than 10 years (13.7%), and less than three years (3.1%). The statistics reflect that the majority of the participants had more than 6 years of experience, which can be correlated with age groups. Participants high experience levels may be supportive of gathering quality data, as they might have increased awareness and knowledge about various policies and decision making in relation to various public projects.

With respect to the level of challenges associated with various design aspects of NEOM city, the mean ratings and standard deviation (SD) reflect a high level of challenges associated with all objectives, including the design of multilayered transport (mean = 4.3, SD = 1.21); the design of NEOM as a home and workplace for more than a million citizens from around the world (mean = 4.3, SD = 1.27); the design of a living laboratory, i.e., a place where entrepreneurship will chart the course for a new future (mean = 4.2, SD = 1.34); the design of robotic services powered by AI technologies in every sector (mean = 4.2, SD = 1.65); with the exception of its location (mean = 2.2, SD = 1.63). In addition, low SD levels indicate that most of the participant ratings are clustered around the mean, indicating low variance in participant responses and reflecting a strong opinion in relation to the questionnaire items.

Table 1. Frequency distribution of demographic variables.

Variable	n (%)
Gender	
Male	322 (77.2%)
Female	95 (22.8%)
Age	
20–29	15 (3.6%)
30–39	198 (47.5%)
40–49	176 (42.2%)
50–59	26 (6.2%)
>59	2 (0.5%)
Education	
Bachelor's Degree	54 (12.9%)
Master's Degree	307 (73.7%)
Ph.D.	21 (5%)
Other	35 (8.4%)
Experience	
<3 years	13 (3.1%)
3–5 years	162 (38.8%)
6–10 years	185 (44.4%)
>10 years	57 (13.7%)

The severity of legal, contractual, operational, and maintenance risks evaluated in the study are presented in Figure 1. All types of legal risks were classified with a medium level of severity, and SDs reflected that there are no major differences among the participants' responses. In relation to contractual risks, the severity of all items was assessed as very high. In relation to operations and maintenance risks, failure of IT systems and errors by contractors were identified as high-severity risks. Only one item, fraud, was identified as low-risk; however, with an SD of 3.14, differences among participant responses were observed.

**Figure 1.** Severity of legal, contractual, operational, and maintenance risks.

The severity of risks related to human resources, finance, and force majeure are presented in Figure 2.

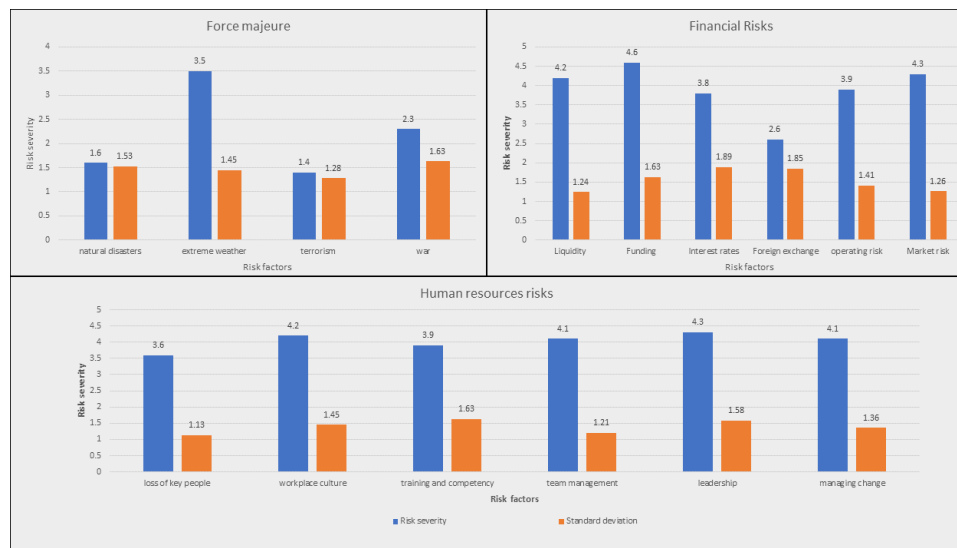


Figure 2. Severity of human resources, finance, and force majeure risks.

Risks associated with human resources are among the factors that raised concerns among participants, as most of the items, including workplace culture, team management, leadership, and change management, were identified to be associated with high risk severity. In relation to financial risks, liquidity, market risk, and funding were identified to be major risks, whereas foreign exchange was identified as low-risk. All items related to force majeure were identified as low risk severity, except extreme weather conditions.

The severity of technological and political risks is presented in Figure 3. Privacy and security challenges were rated as very high-severity risks, followed by cyber theft and data loss. Quality is another aspect that was rated as a high-severity risk; however, a differences among participant responses was observed ($SD = 3.11$). With respect to political risks, most of the items reflected medium-level severity. Interestingly, political instability was identified as a very low-severity risk, and there was a considerable difference among participants responses on this item.

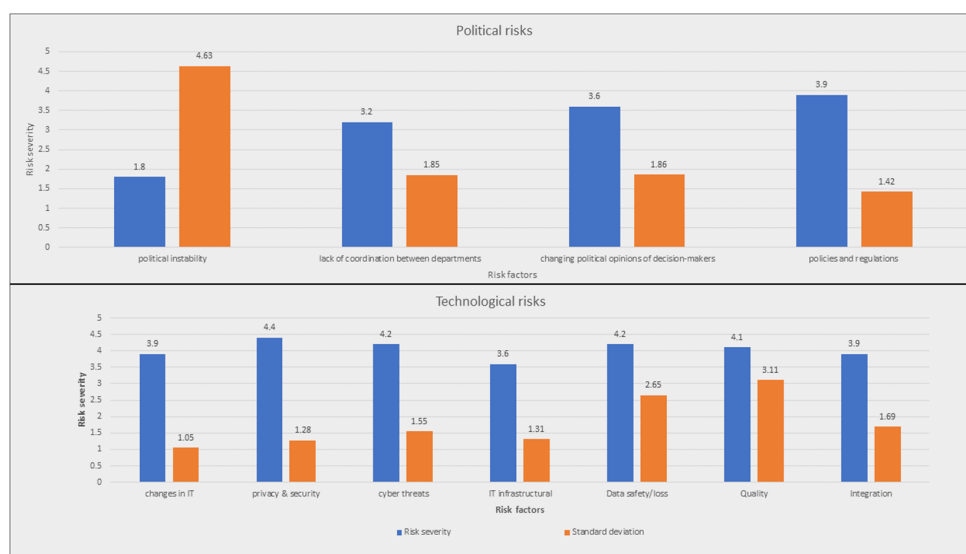


Figure 3. Severity of technological and political risks.

All risks related to environmental aspects were identified as medium- to low-level risks in terms of severity (Figure 4). Carbon footprint and the development of renewable energy sources were identified as low-severity risks; however, achieving sustainability and the impact on sea and land were considered to be medium-severity risks.

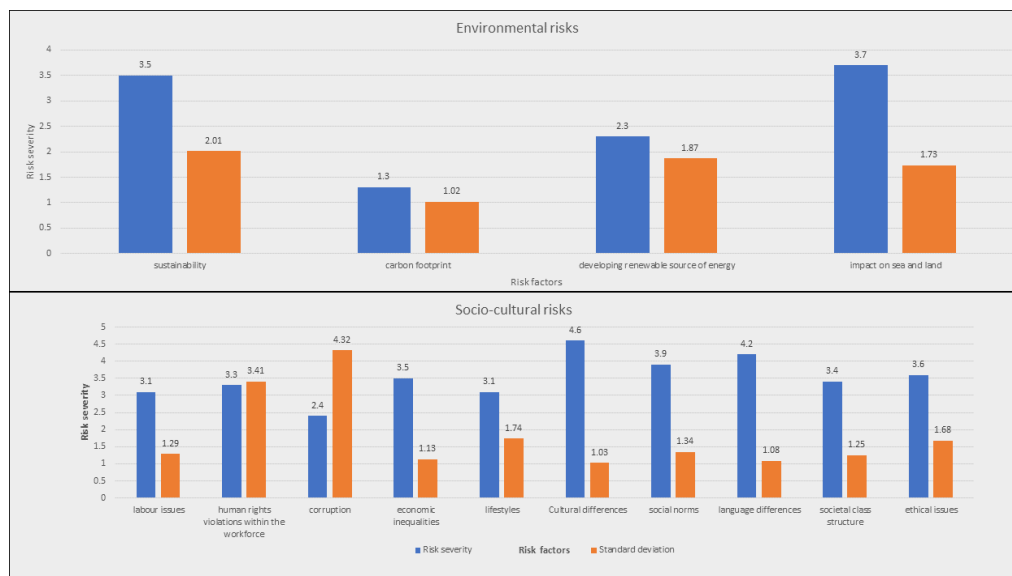


Figure 4. Severity of environmental and sociocultural risks.

In relation to sociocultural risks, language (mean = 4.2, SD = 1.08) and cultural differences (mean = 4.6, SD = 1.03) were identified as high-severity risks, with these evaluations strongly supported by a majority of participants. Other items, such as human rights violations within the workforce (mean = 3.3, SD = 3.41) and corruption (mean = 2.4, SD = 4.32) were identified as medium-severity risks; the participant responses to these items differed considerably, with a high level of variance. Overall, sociocultural risks were evaluated as medium- to very high-severity risks associated with the NEOM project.

4. Discussion & Conclusions

The objectives of NEOM city, as discussed in the Introduction, include large-scale infrastructural designs for the future, which are associated with various risks and challenges. Findings of a quantitative analysis reflected that all major design objectives, such as a multilayered underground transport system, a population of more than one million residents, the use of robot services in various sectors, the design of a city for entrepreneurship and innovation, were identified to be very challenging. In order to achieve such a challenging objective, most of existing cities, such as Silicon Valley (Etikan et al. 2016) in USA, took years of contribution from government, investors, companies, entrepreneurs, and the people to create a city with diverse cultures powered by entrepreneurship and innovation. Similarly, the London Underground train network has undergone several phases of development and maintenance through the years (Katz 2015). In addition, applications of robotic services powered by artificial intelligence (AI) are not yet fully operational, and research in this area is still progressing. Therefore, the objectives of NEOM, with a short timeline for completion (2030), represent a challenging process that requires the collaboration of various entities in the design and development of the city.

Accordingly, the risks associated with the NEOM project can be identified from a multidimensional perspective and categorised into ten categories. Focusing on the results related to environmental risks, high risks were identified in relation to the sustainability (mean = 3.5, SD = 2.01) of the project and its impact on sea and land (mean = 3.7, SD = 1.73), and low risks were identified with respect to renewable sources of energy. Vast, empty deserted land in the region can be used to install renewable energy projects, such as solar

power plants. However, other aspects, such as setting up an artificial moon to light up the sky in at night, increasing sea trade on the Red Sea (currently accounts for 13% of global marine trade) (Goda et al. 2019) setting up ports, illuminating beach sands with artificial chemicals, using cloud seeding technology for artificial rains (Wolmar 2012), have potential environmental impacts on the region. Although the city would rely on 100% clean energy, its impact on the environment resulting from the above-mentioned plans represents environmental risks.

The analysed severity of financial risks, liquidity, funding, and market risks was rated as very high. Funding is one of the most important aspects and is essential for large-scale projects such as NEOM. Although the Saudi government has allocated USD 500 billion, considering the investment costs and timeline, it is essential to acquire FDIs while maintaining the brand image. However, recent incidents such, as the Kashogi murder, which led to Prince Mohammad Bin Salman stating, “No one will invest [in the project] for years,” (Scheck et al. 2021) can increase the risk of funding and liquidity (individual buyers and investors in the city vs. investment in the city), as well as market risk. Therefore, it is important to consider every decision that might affect the funding of NEOM until its completion. Focusing on the technological risks, privacy and safety, data loss, cyber threats, and quality were identified as major risks correlated with an increasing prevalence of cyber threats around the world (Kerr and Raval 2018). Issues in technology could affect business operations in the planned city. Accordingly, failure of IT systems (mean = 4.2, SD = 2.28) and errors and omissions by contractors (mean = 4.1, SD = 1.18) were identified as major risks in terms of operations and maintenance. In addition, the risk of fraud was identified as a medium-severity risk, although responses varied across participants, indicating a level of uncertainty with respect this factor. Effective management of human resources is essential for effective management of operations. In this context, the severity of risks associated with workplace culture, transformational leadership, team management, and change management was rated as very high. As Saudi Arabia is highly dependent on expatriates in various sectors, the severity of risks related to leadership, work culture, and team management is high, as workers from various cultures and nationalities are employed in projects (Elnaim 2013; Swick 2018).

Few major risks were identified in different categories with high severity and low severity. Based on the mean ratings of each type of risk, the identified risks were hierarchically presented based on their severity, as shown in Table 2. Risks related to human resources and technology factors were identified as high-severity, whereas environmental, legal, and force majeure risks were identified as low-severity, and other risks were identified as medium-severity.

Table 2. Hierarchical representation of risks based on severity.

Risk	Severity
Human Resources Risks	4
Technology Risks	4
Contractual Risks	3.9
Financial Risks	3.9
Operational and Maintenance Risks	3.6
Sociocultural Risks	3.5
Political Risks	3.1
Environmental Risks	2.7
Legal Risks	2.5
Force Majeure Risks	2.2

Human resource challenges are among the pre-existing challenges that Saudi Arabia has been facing due to its dependency on expatriates. Although the vision of the NEOM project is to create a knowledge-based economy, to achieve its dream, stakeholders must rely on expatriates and other local talent resources to make NEOM a reality. Lack of resources is also related to technological risks, as well as issues related to contracts, the severity of which is similar to that of human resource risks. Financial risks are volatile, as they can be affected by various factors and were identified as high-severity. Operational and maintenance, sociocultural, and political risks were identified as medium-severity, as the project is publicly funded, and Saudi Arabia already houses a large number of expatriates who are living cordially in Saudi society. Given the project's dependence on clean energy and its location, the severity of environmental and force majeure risks were identified as low-severity.

With respect to political risks, the majority of the risks were associated with policy and decision makers working for the government, as well as a lack of coordination among governmental departments. The nature of policies and regulations was also associated with high-severity risk. Although political instability was rated as low-risk, participant responses varied considerably, indicating a level of uncertainty. As a public project, there are political risks associated with NEOM, and political instability is a cause for concern if identified. Political risks of public projects are strongly associated with legal risks. As NEOM is a public project, legal risks were identified as low-to-medium-severity, with no major differences of opinions among participants. However, contractual risks were identified as high-severity, as there will be many contracts between companies, investors, and the government. Finally, sociocultural risks, such as cultural and language differences, were identified as high-severity risks.

This study identified and evaluated various types of risks and challenges associated with NEOM. However, there are few limitations observed in this study. First, this study adopted a survey instrument for data collection. Using additional methods, such as case study comparison and qualitative interviews can lead to collection of quality data, which can enable improved analysis and classification of risks. In addition, the sample consisted of experts from Saudi Arabian government departments. Including additional international experts could have helped to analyse risks from various perspectives. With a lack of existing literature in the context of risks associated with mega projects, the findings and limitations of this study can contribute to future research. The findings in this study can have practical implications and decision makers in with analysis or risks, development of risk-mitigation plans to ensure smooth implementation of mega projects such as NEOM, and in designing marketing and promotional strategies, as well as business ethics codes for NEOM. In addition, this study has theoretical implications, as the findings from this study can be used for future research in project management and marketing studies related to NEOM.

5. Recommendations

Based on the analysis, this study provides following recommendations to address the identified risk factors. First, in order to address human resource risks, there is a need to adopt changes in workplace culture, such as providing training to employees, increasing stakeholder awareness, effective team management, and reflecting transformational leadership. Transformational leadership is among the most important approaches to leading the and transforming workplace culture, resulting in a more productive environment. Secondly, a more transparent approach with respect to innovative technologies, such as artificial intelligence and machine learning should be adopted to address the increasing prevalence of cyber threats and improving privacy and security aspects associated with various applications to be used in the city. Thirdly, a preplanned approach reflecting risk-mitigation plans, as well as repeated review of contractual clauses and agreements, must be adopted before starting various projects in the city by adopting effective communication between all the stakeholders in order to avoid failures and legal issues, which may halt development. Fourthly, various strategies, such as FDIs, low-interest loans, partnerships, joint ventures,

grants, and support from the government, should be adopted in order to improve funding and reduce market risks. Fifthly, an effective value-based strategy, such as circular economy concepts, should be integrated into development projects to minimize operational and maintenance risks. Lastly, as Saudi culture is different from other that of other countries in the West and South (Alkhamis et al. 2017), integrating a million people with different cultures, classes, and social status represents a major challenge, which requires major relaxations in terms of social norms and policies.

Funding: This research received no external funding.

Data Availability Statement: Upon request from the author.

Conflicts of Interest: The author declared no conflict of interest.

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